



{In Archive} Re: Fw: TRIP REPORT: 2006 El Paso Desalination Conference



Ray Leissner to: Suzanne Kelly
Cc: Kurt Hildebrandt, Frazier.Mike

03/21/2006 02:23 PM

From: Ray Leissner/R6/USEPA/US
To: Suzanne Kelly/DC/USEPA/US@EPA
Cc: Kurt Hildebrandt/WWPD/R7/USEPA/US@EPA, Frazier.Mike@EPA.GOV
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Thanks Sue,

I'll pass your report along. I also conclude a UIC 101 presentation would be beneficial. Specifically one that points out the obvious benefits of injecting below USDWs.

I also suggest we *consider* recommending a presentation from well bore stimulation/treatment experts, to address the concerns evident in the audience about precipitants fouling the injection formation. However, this suggestion causes me to raise a not-so-small issue...

What sort of stimulation / treatment does the UIC program allow for wells injecting into a USDW?

Sounds like a job for the NTW!! Tell that group to don their capes and tights and meet us in Dallas!

Kurt in tights. Its the only thought scarier than the issue I just raised....

Ray Leissner, Env. Eng.
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Suzanne Kelly/DC/USEPA/US

03/21/2006 10:49 AM

To Ray Leissner/R6/USEPA/US@EPA, Kurt
Hildebrandt/WWPD/R7/USEPA/US@EPA
cc

Subject Fw: TRIP REPORT: 2006 El Paso Desalination Conference

Ray & Kurt,

I had fun in El Paso and learned quite a bit at the conference. Thanks for all the laughs.

Here is my trip report in case you can use it on your end.

Talk to you soon,

Sue

Suzanne Kelly
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----- Forwarded by Suzanne Kelly/DC/USEPA/US on 03/21/2006 11:44 AM -----



**Suzanne
Kelly/DC/USEPA/US**
03/21/2006 11:43 AM

To Ann Codrington/DC/USEPA/US, Roy Simon/DC/USEPA/US,
Bruce Kobelski/DC/USEPA/US, Lee
Whitehurst/DC/USEPA/US

cc

Subject TRIP REPORT: 2006 El Paso Desalination Conference

Below is a summary of the March 15-17 Desalination "Concentrate on Concentrate" Conference in El Paso. The focus of the conference was on the management and disposal of concentrate generated by groundwater desalination facilities. It was a really good conference where over half of presentations focussed on research, permitting and/or the feasibility of using underground injection.

Conference Attendees:

There were about 200 participants including: Department of Energy (Sandia National Lab), US Bureau of Reclamation, USGS, AWWA, WaterReuse, Los Alamos National Lab, State Regulators (eg. TCEQ), Universities (eg. Texas A&M University and University of New Mexico), and various water utilities and industry representatives. EPA representatives included: Region 6 (Ray Leissner), Region 7 (Kurt Hildebrandt) and HQ (myself).

Conference Main Points, Outcomes and Next Steps:

- Concentrate disposal is big issue for the progression of desalination technology. The Dept. of Interior's (USBR) Water 2025 Initiative (~20 million budget) hinges on this technology moving forward. USBR is heavily investing in R&D for concentrate disposal, no mention of EPA involvement.
- Major injection issues discussed included: corrosivity, seismicity, reservoir capacity, arsenic/rads disposal and mineral precipitation (calcium, magnesium, antiscalents and silica) in the treatment process and in the reservoir.
- Several speakers (eg. El Paso, Florida) presented that they found underground injection to be more affordable than other disposal options considered.
- Sandia Lab and Los Alamos National Lab are modeling reservoirs in NM to determine compatability for receiving RO waste. They have not included EPA or State UIC Program in this effort; the idea of contacting us for data to verify models was well received. Sandia is also researching capacitive deionization for the reuse of Coal Bed Methane (CBM) produced waters.
- El Paso (largest inland disposal plant) is currently under construction. An estimated 1.3 to 3.2 mgd of concentrate will be injected into 5 Class V wells which will be constructed to Class I standards (eg. pressure fall of tests, area of review, etc). The target formation is 2,300 -3,770 ft deep with a 7,000 TDS. The pilot test well was drilled in 2004 and the authorization to inject was given in 2005. The cost for the pilot well was \$1.4 million and they expect that the total cost of injection will be 10-15% of total plant cost when finished. They are currently working on precipitation studies for the wells and the facility design. April 2007 is the target date for plant startup.
- Florida presented that their RO wells are required to have steel casing and fiberglass tubing, packer, and two zone monitoring for plume migration.
- Texas A&M is researching how to use concentrate instead of freshwater for CBM activities.
- Interesting to note-- the majority of the presentations did not capture the UIC Program correctly, indicating to us the need for education and outreach. Maybe a UIC Program 101 presentation will be

well received (or not) at the next conference.

- Next Desalination Concentrate Conference (Fall 2007) will include a tour of the El Paso injection well facility.

NTW Drinking Water Treatment Residual (DWTR) subgroup side-meeting:

The two leads for the National Technical Workgroup DWTR issue paper, Kurt and I, held a meeting to discuss Cynthia's comments, milestones and next steps. We also met with Cadmus to discuss deliverables that will feed into the DWTR technical paper. Here are our next steps:

1. Sue Kelly to brief Ann Codrington on Cynthia's comments and the changes we propose for the DWTR paper before the end of March.
2. Steve Heare to sign off on revised DWTR paper (giving the workgroup official charge to move forward) by the end of March.
3. Hold conference calls with subgroup as needed to develop paper (April-September)
4. Present progress update at Branch Chief's Meeting in Kansas in May (*We expect the Branch Chief's will have questions based on the results from the DW Branch Chiefs meeting*)
5. Develop final draft technical paper by September 2006.
6. Present results at the September 2006 GWPC meeting in Miami. The purpose of this presentation will be to solicit feedback from the states on the recommendations set forth in the technical paper.
7. Solicit approval from management to form a EPA workgroup (after September 2006) to discuss:
 - A. The issues surrounding injection of DWTR
 - B. The current regulatory requirements for DWTR (eg. how do we move forward with existing regs?)
 - C. The technical recommendations (construction, operation, maintenance) presented in the NTW paper
 - D. The need for research, guidance and/or a change in regulation.

Let me know if you have any questions.

Thanks!

Sue

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